WHAT IS CLAIMED IS:

SUB A1 1. A moving picture encoding system for encoding each picture included in a sequence of moving pictures in units of a unit group comprised of a plurality of pictures including said each picture, said system comprising:

encoding control means for, when said unit group includes a plurality of different types of pictures which are to be encoded with different encoding methods, setting a target quantiser step size used to encode each of the different types of pictures included in said unit group, and for performing a control operation to generate and furnish a quantiser step size so that a ratio among the target quantiser step sizes set for the different picture types is a predetermined one; and

encoding means for encoding said each picture included in said sequence of moving pictures including said each picture using said quantiser step size furnished by said encoding control means and using either said each picture or prediction from a past intra coded image and/or a predictive coded picture.

2. The moving picture encoding system according to Claim 1, wherein said encoding control means initially sets the quantiser step size for a macroblock to be encoded first in said each picture currently being encoded to the target quantiser step size set for the picture type of said each picture currently being encoded, and then, each time it encodes each of macroblocks remaining in said each picture currently being encoded, updates the quantiser step size initially set for the first macroblock so that the average of the quantiser step sizes used during the encoding of all macroblocks in said each picture

finally approaches the target quantiser step size set for the picture type of said each picture currently being encoded.

3. The moving picture encoding system according to Claim 1, wherein said encoding control means further extracts a feature of said sequence of moving pictures to be encoded which represents a degree of complexity of said sequence of moving pictures to be encoded, and wherein said encoding control means adaptively updates said ratio among the target quantiser step sizes set for the different types of pictures according to said extracted feature of said sequence of moving pictures.

4. The moving picture encoding system according to Claim 2, wherein said encoding control means further extracts a feature of said sequence of moving pictures to be encoded which represents a degree of complexity of said sequence of moving pictures to be encoded, and wherein said encoding control means adaptively updates said ratio among the target quantiser step sizes set for the different types of pictures according to said extracted feature of said sequence of moving pictures.

5. The moving picture encoding system according to Claim 1, wherein said encoding control means determines whether an amount of codes to be generated when encoding said each picture in the unit group will deviate by a predetermined range or even more from a target amount of generated codes for said each picture if the encoding is carried out using the target quantiser step sizes set for the plurality of picture types, and wherein, if said encoding control means determines that such a deviation from the target amount of generated codes will occur,

said encoding control means updates the target quantiser step sizes set for the different types of pictures.

6. The moving picture encoding system according to Claim 2, wherein said encoding control means determines whether an amount of codes to be generated when encoding said each picture in the unit group will deviate by a predetermined range or even more from a target amount of generated codes for said each picture if the encoding is carried out using the target quantiser step sizes set for the plurality of picture types, and wherein, if said encoding control means determines that such a deviation from the target amount of generated codes will occur, said encoding control means updates the target quantiser step sizes set for the different types of pictures.

7. The moving picture encoding system according to Claim 1, wherein said encoding control means further extracts a feature of said sequence of moving pictures to be encoded which represents a degree of complexity of said sequence of moving pictures to be encoded, and determines whether a scene change has occurred during the encoding of said each picture included in said unit group, and wherein, if said encoding control means determines that a scene change has occurred during the encoding of said each picture, it updates said ratio among the target quantiser step sizes set for the different types of pictures and their values according to the extracted feature of said sequence of moving pictures.

8. The moving picture encoding system according to Claim

2, wherein said encoding control means further extracts a feature of said sequence of moving pictures to be encoded which represents a degree of complexity of said sequence of moving pictures to be encoded, and determines whether a scene change has occurred during the encoding of said each picture included in said unit group, and wherein, if said encoding control means determines that a scene change has occurred during the encoding of said each picture, it updates said ratio among the target quantiser step sizes set for the different types of pictures and their values according to the extracted feature of said sequence of moving pictures.

9. The moving picture encoding system according to Claim 1, wherein said encoding control means determines whether a scene change has occurred during the encoding of said each picture included in said unit group, and wherein, if said encoding control means determines that a scene change has occurred during the encoding of said each picture, it adaptively changes the type of the current picture currently being encoded in which the scene change occurs and also updates said ratio among the target quantiser step sizes for the different types of pictures and their values.

10. The moving picture encoding system according to Claim 2, wherein said encoding control means determines whether a scene change has occurred during the encoding of said each picture included in said unit group, and wherein, if said encoding control means determines that a scene change has occurred during the encoding of said each picture, it adaptively changes the type of the current picture currently being encoded

in which the scene change occurs and also updates said ratio among the target quantiser step sizes for the different types of pictures and their values.

11. The moving picture encoding system according to Claim 1, wherein said encoding control means only uses an amount-of-generated-codes-versus-quantiser-step-size characteristic of pictures of a certain type in order to set the target quantiser step sizes used to encode the different types of pictures which are to be encoded with the different encoding methods.

12. The moving picture encoding system according to Claim 2, wherein said encoding control means only uses an amount-of-generated-codes-versus-quantiser-step-size characteristic of pictures of a certain type in order to set the target quantiser step sizes used to encode the different types of pictures which are to be encoded with the different encoding methods.

13. The moving picture encoding system according to Claim 1, wherein when said unit group includes a picture to be intra-coded or an I-picture, a picture to be predictive-coded or a P-picture, and a picture to be bidirectionally-predictive-coded or a B-picture, said encoding control means extracts a feature of said sequence of moving pictures which represents a degree of complexity of said sequence of moving pictures to be encoded, and wherein if the extracted feature of said sequence of moving pictures indicates that the amount of motion between pictures is relatively small, said encoding

control means sets the amounts of generated codes assigned to each I-picture, each P-picture, and each B-picture within said unit group so that the amount of generated codes assigned to each I-picture is the largest, the amount of generated codes assigned to each P-picture is the second-largest, and the amount of generated codes assigned to each B-picture is the smallest, and, as the amount of motion between pictures represented by the extracted feature increases, updates said ratio among the target quantiser step sizes for the different types of pictures so that the differences among the amount of generated codes assigned to each I-picture, each P-picture, and each B-picture are reduced.

14. The moving picture encoding system according to Claim 2, wherein when said unit group includes a picture to be intra-coded or an I-picture, a picture to be predictive-coded or a P-picture, and a picture to be bidirectionally-predictive-coded or a B-picture, said encoding control means extracts a feature of said sequence of moving pictures which represents a degree of complexity of said sequence of moving pictures to be encoded, and wherein if the extracted feature of said sequence of moving pictures indicates that the amount of motion between pictures is relatively small, said encoding control means sets target amounts of generated codes allocated to each I-picture, each P-picture, and each B-picture in said unit group so that the target amount of generated codes allocated to each I-picture is the largest, the target amount of generated codes allocated to each P-picture is the second-largest, and the target amount of generated codes allocated to each B-picture is the smallest, and, as the mount

of motion between pictures represented by the extracted feature increases, updates said ratio among the target quantiser step sizes for the different types of pictures so that the differences among the target amounts of generated codes allocated to each I-picture, each P-picture, and each B-picture are reduced.